

Delta Operations for Salmon and Sturgeon (DOSS) Group

Conference call: 1/11/11, 9:00 a.m.

Objective: Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmon and green sturgeon.

DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: <http://swr.nmfs.noaa.gov/ocap/actions.htm>

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Agenda

- 1) Fish monitoring
- 2) Water project operations
- 3) Forecasts
- 4) Clarify trigger language
- 5) Second spring-run surrogate release
- 6) Structure of DOSS

Fish Monitoring

Knights Landing: Flows from 1/3/11 through 1/10/11 averaged 21,474 cfs; flows will be reduced this week. There were 777 fish caught since 1/3/11, of which 723 were fall run, 17 were winter run, 33 were spring run, 1 was ad-clipped late-fall run, and 3 were ad-clipped steelhead. No wild steelhead were caught. Average CPUE = 52.5 for fall and spring run; 1.2 for winter and late-fall run. Water temperatures ranged from 48 to 49°F.

Tisdale Weir: Flows from 1/3/11 through 1/10/11 averaged 20,450 cfs. There were 855 fish caught, of which 833 were fall run, 15 were spring run, and 5 were winter run; there was 1 ad-clipped and 1 non-clipped (wild) steelhead. There were no late-fall run caught. Average CPUE = 53.53 for fall and spring run, 0.31 for winter and late-fall run, and 0.0624 for non-clipped (wild) steelhead. Water temperatures ranged from 46.4 to 48.2°F; turbidity averaged 12.42 NTU.

Moulton Weir: Flows from 1/3/11 through 1/10/11 averaged 18,276 cfs and are now tapering off. There were 802 fish caught, of which 758 were fall run, 3 were winter run, 16 were spring run, 24 were ad-clipped steelhead (most likely from Coleman Hatchery), and 1 was a non-clipped (wild) steelhead. Average CPUE = 49.79 for fall and spring run, 0.19 for winter and late-fall run, and 0.068 for non-clipped steelhead. Water temperatures ranged from 43 to 48.2°F; turbidity averaged 10.9 NTU.

Mossdale: Data from 1/2/11 through 1/7/11 showed that 1 late-fall-run salmon was caught; no other species of concern were caught. Water temperatures ranged from 47.5 to 48.4°F.

Sacramento trawl at Sherwood Harbor: Data from 1/3/11 through 1/7/11 showed that 27 fish were caught, of which 24 were fall run and 3 were spring run; there were no other species of concern. Water temperatures ranged from 45.9 to 47.5°F.

Chipps Island trawl: Data from 1/3/11 through 1/7/11 showed that 104 fish were caught, of which 2 were late-fall run, 1 was winter run, 13 were ad-clipped fish (most likely from Coleman and possibly late-fall run), 76 were longfin smelt, and 12 were delta smelt. Water temperature ranged from 7.5 to 9.1°C.

Beach Seines: Data from 1/2/11 through 1/6/11 showed that 1,166 fish were caught, of which 1,063 were fall run, 86 were spring run, 1 was late-fall run, 15 were winter run, and 1 was delta smelt caught at Liberty Island. Water temperatures averaged 8.2°C.

There are a lot of fish coming into the Delta right now; very few are going out at Chipps Island—some are showing up at the pumps right now.

Salvage and Loss Data to 1/9/11

CVP: from 1/3/11 to 1/9/11

Fall run: No ad-clipped salvaged; 52 non-clipped were salvaged, 31 non-clipped were lost.

Late-fall run: 5 ad-clipped were salvaged; 4 were lost. There were no non-clipped salvaged.

Spring run: No ad-clipped fish were salvaged; there were 12 non-clipped salvaged and 6 non-clipped lost.

Winter run: There were 4 ad-clipped salvaged and 3 ad-clipped lost; 36 non-clipped salvaged and 24 lost. The cumulative total winter-run is 440 since 10/1/10 at both facilities

SWP:

Fall run: There were 12 ad-clipped salvaged and 51 lost; 6 non-clipped were salvaged, 25 non-clipped were lost.

Late-fall run: 46 ad-clipped were salvaged; 198 were lost. There were no non-clipped salvaged.

Spring run: None

Winter run: 20 ad-clipped fish were salvaged 87 were lost; there were 36 non-clipped salvaged and 153 non-clipped lost.

Steelhead

One steelhead caught at SWP on 1/4/11 for a total of 7 salvaged for the year since October 2010.

Older Juvenile Chinook Loss and Loss Density (1/3/11–1/9/11)

Loss at SWP was highest at 59.26 on 1/6/11; at CVP, it was highest at 7.81 on 1/5/11. Loss density peaked on Thursday (1/6/11) at 2.5 (from 0.3 the previous day); it is less than that for the first trigger for winter-run daily loss. The preliminary trigger calculated last week was 3.5 winter run lost/TAF.

Operations

Feather River at Oroville Dam: DWR releasing 1,750 cfs.

San Joaquin R at Vernalis: Anticipate higher flows of 18,000 cfs, currently at 16,000 cfs.

Sacramento R at Freeport: has been dropping; flows were 38,966 cfs yesterday (1/10/11), last week close to 60,000 cfs. Delta Outflow is running close to 44,000 cfs.

Sacrament River at Keswick Dam: 8,000 cfs.

American River at Nimbus Dam: Ramping down to 4,000 cfs by Wednesday (1/12/11).

Stanislaus River at Goodwin Dam: Flows are at 200 cfs.

CVP exports: pumping at 4,100 cfs.

San Luis Reservoir: Reservoir level is at 801 TAF on the SWP side.

San Joaquin River: Flows are close to 15,000–16,000 cfs; some erosion has been reported downstream of the Vernalis gauge on the levee embankment. DWR crews had done some work on it in past summers; a new gauge was installed at the bridge (71.5-mile point). They have begun putting in rocks as of yesterday and are given 15 days to come up with a temporary fix to slow down the erosion. They went out last Thursday to inspect and seek out a contractor to do a temporary fix on the water side of embankment to slow down erosion. Because of that, flows in the San Joaquin River will temporarily drop off; coordinated through emergency services (not just DWR) to temporarily reduce flood releases. Flows will be dropping down close to 10,000 cfs in the coming days. Most of water levels in reservoirs on the upper San Joaquin are up into the flood control ranges. This does not include New Melones Reservoir—not yet in flood control. It is more likely that the reservoirs will continue to release flows through spring.

SWP Clifton Court: Pumping scheduled to be 8,300 cfs today. We can adjust this according to Vernalis flows. Exports will be lower in the coming days.

E/I ratio: 16%

OMR: Flows are in compliance. The 5-day average was -3,977 cfs. Since then, they are closer to -5,000 cfs. The daily flows are still tracking well. Yesterday we projected -3,300 cfs; the day before it was close to -4,000 cfs. Flows are definitively on track to meet the 14-day -5,000 cfs mark; since 1/9/11, we are already at -4,952 cfs.

As of yesterday, the 5-day average OMR was at -5,000 cfs. The average came out to be 5,135 cfs vs. the 5-day of 5,143 cfs using the MET equation; therefore, the equation is tracking within 10 cfs; it's very accurate. The MET equation (i.e., how OMR calculations are done) from 2008 is in the Science Panel report. DOSS will try to find the write up on it and provide it on the website.

Turbidity: Holland Tract is still holding at around 7–8 NTU; the trigger is 12 NTU for the 3-day average at all three stations. Victoria is close to 13 NTU; 14–16 NTU at Prisoner Point.

Weather: We may have a north system beginning today but not a big storm. A high-pressure system is driving everything north.

Second spring-run surrogate release

The release is scheduled for Friday, 1/14/11, at Coleman Hatchery. Thursday's rain will trigger the release window. Coleman is releasing two groups with a combined total of 140,000 late-fall Chinook surrogates; they will release some acoustic tagged fish as well for their own study and are looking at late-fall run survival through the Delta.

Coded Wire Tags (CWT)

The issue of tag counts being a few days/weeks behind was discussed. FWS was contacted regarding a procedure to pick up the fish with CWTs on a more timely basis from the fish facilities. There is no more information about getting daily real-time reporting of this data. It will take another few weeks to get the current tags read. The pickup of the fish and tag readings need to be done more quickly.

Second Trigger

Oppenheim sent out draft language on the second trigger to the group this morning. The subgroup did not deal with the steelhead trigger; but if we modify the Chinook second trigger, it will be the same as the 4th trigger for steelhead. This is a good task for DOSS in the future to see how the trigger actually relates to steelhead and whether it correlates the same way with salmon.

Third trigger

JPE estimate now has incidental take level for hatchery releases (CWT fish). DOSS has all the information for the 3rd trigger (0.5% of hatchery releases) and can now advise WOMT when the triggers are met.

NMFS is preparing the letter to Reclamation with the official JPE; it should be out this week. A few numbers needed to be revised, such as average fecundity this year. Incidental take limit at the pumps changed from 6,900 to 6,640 winter-run—when those were added in. It will probably drop daily loss from 3.5 down to 3.3 fish/TAF exported. FWS, DFG (in Red Bluff and Sacramento, add Dan Kratville and Carl Wilcox) and DWR will get copies of the letter. NMFS typically writes a letter on JPE each year between December and February, but should now put it out by January 1st each year now because of the trigger language.

DOSS Structure

A recommendation that came out of the Science Panel review was that the DOSS group have more discussions and analyses of the data instead of just going through the updates and reporting the data. This would entail that individuals on the DOSS team agree on what analyses are needed, check the data, and be up to speed on what the information provides. DOSS should spend more time discussing the biological responses to Delta operations, which is what DOSS is really tasked to do. We need to look at reactions and 6-year acoustic study results. Some DOSS people were asked to take over data reporting:

DWR (Llaban) will provide loss density and coded–wire-tag data.

DFG (Kratville) will report on rotary screw trap data (no data from Mill and Deer Creeks yet). DFG will report Knights Landing, Moulton, and Tisdale.

NMFS (Stuart) will provide the smelt working group report.

Other Business

- 1) **Smelt working group.** There was a phone call yesterday. Water temperature is declining in the Delta—46.9°F. Water is getting less turbid; didn't hit the Holland Tract 12 NTU but did hit the trigger at Victoria and Prisoner Point but not at all three stations. San Joaquin turbidity is coming down. Grant Line is still pretty high; the rest is fairly low at the 10–15 NTU range. No salvage or loss last week. 29 delta smelt; 191 longfin smelt reported in the trawls. The 2010 recovery index is 11. No triggers have been met for any RPA actions. San Luis Reservoir is filling quickly; will be at capacity by mid- to late February. DWR will keep the group apprised as to how the southern California reservoirs look, and whether there will be a call for Article 21 water.

DOSS Advice:

The DOSS group is advising the NMFS and WOMT today of the new language clarifying the triggers on page 649 of the NMFS BiOp for Action IV.2.3.

First trigger: Daily older juvenile loss > winter-run JPE/2000

This number was revised downward from last week's preliminary estimate 3.5 fish/TAF to 3.3 fish/TAF based on changes made to the winter-run JPE this week. The official JPE should come out this week in a letter to Reclamation and DWR. Until the official letter comes out DOSS advice is to use the preliminary numbers above.

2nd trigger: 1st level of concern: daily loss > 8 fish/TAF multiplied by exports (TAF)

2nd level of concern: daily loss > 12 fish/TAF multiplied by exports (TAF)

This represents the DOSS subgroup's best reconstruction of the actual trigger in the original Salmon Decision Process (see language provided by Barb)

3rd trigger: Cumulative total loss of CWT releases > 0.5%. The numbers are calculated from the hatchery releases and the JPE. As soon as data becomes available from the recovery of CWT's at the export facilities this trigger will be monitored.

4th trigger: Daily loss of wild steelhead will use the same numbers as Chinook in 2nd trigger until data on steelhead loss can be analyzed.

Next Meeting: Conference call: 1/18/11, 9:00 a.m.

NOTE: The following text was provided by the DOSS subgroup to the DOSS group after the conference call.

The second and fourth triggers in Action IV.2.3, relating to management of Old and Middle River flows, are based on observed loss of fish at the state and federal fish facilities. NMFS modeled those triggers after the triggers implemented in the Salmon Decision Process¹, but

¹ NMFS extended the Salmon Decision Process logic to steelhead to provide a loss density trigger for steelhead (steelhead triggers not included in any earlier version of the Salmon Decision Tree).

discovered in 2010 that the trigger formulas (as included in the Salmon Decision Process) were not correct. DOSS convened a subgroup of biologists (including key staff involved in developing the Salmon Decision Process) to review the data from the Salmon Decision Process (described in the OCAP biological assessment), determine the original trigger calculation/formula, and clarify the intent of this trigger.

The subgroup reported back that the intended equations for the first and second levels of concern were:

*1st level of concern: daily loss > 8/TAF * exports (TAF)*

*2nd level of concern: daily loss > 12/TAF * exports (TAF)*

If rearranged such that the trigger is in terms of loss density rather than loss, the 1st and 2nd levels of concern are triggered at loss densities of 8 fish/TAF and 12 fish/TAF, respectively.

The subgroup also clarified that the “loss” in the second trigger was intended to be the same as the “older juvenile loss” in the first trigger, that is, the total daily loss of all unclipped Chinook above the minimum length-at-date for winter-run Chinook. As noted in the NMFS BiOp, the “loss” in the fourth trigger is the daily loss of unclipped steelhead.

DOSS advises that the 2nd and 4th trigger formulas for Action IV.2.3 be adjusted as described above.

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2nd trigger: *1st level of concern: daily loss > 8 fish/TAF multiplied by exports (TAF)*

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3rd trigger: *Cumulative total loss of CWT releases > 0.5%. The numbers are calculated from the hatchery releases and the JPE. As soon as data becomes available from the recovery of CWT’s at the export facilities, this trigger will be monitored.*

4th trigger: *Daily loss of wild steelhead will use the same numbers as Chinook in 2nd trigger until data on steelhead loss can be analyzed.*